REMARKS

Claims 1-15 remain in the application including independent claims 1 and 6. Claim 7 has been withdrawn from consideration as being drawn to a non-elected invention.

Claims 8-15 stand rejected under 35 U.S.C 112, first paragraph, as failing to comply with the written description requirement. Specifically, the examiner argues that claims 8-15 contain subject matter that was not supported in the specification and constitute new matter. Applicant disagrees.

Claims 8 and 14 include the feature of each of the wire bundles being parallel to, and spaced apart from, each adjacent wire bundle establishing a non-contact relationship between the wire bundles. This is clearly shown in Figure 1. There is no contact between any of the wire bundles 12. Further, the specification describes the bundles 12 as being "circumferentially spaced straight wire bundles 12" and "molded or otherwise encased circumferentially around rotor casing 11 and parallel to an axis that is defined by rotor casing 11" in paragraph [11]. If the bundles are straight, circumferentially spaced about the rotor casing, and are parallel to the axis defined by the rotor casing, then the bundles cannot be in contact with each other. Thus, the limitations of claims 8 and 14 are fully supported by the original specification and the drawings, and no amendment is necessary. However, to facilitate matters, Applicant has amended paragraph [11] to describe the features already shown in Figure 1. No new matter has been added.

Claims 9 and 14 include the feature of the wire bundles being solely connected to each other by the circuit cap. This feature is clearly shown in Figures 1 and 2. As discussed above,

the wire bundles 12 are clearly not connected to each other as shown in Figure 1. The end cap 14 and the connecting pins 15 provide the sole connection structure for connecting each of the wire bundles 12 to each other. This is also clearly described in paragraphs [12] and [13]. Thus, the limitations of claims 9 and 14 are fully supported by the original specification and the drawings, and no amendment is necessary. However, to facilitate matters, Applicant has amended paragraph [12] to describe the features already shown in Figures 1 and 2. No new matter has been added.

Claims 10 and 15 include the feature of each of the bundles being encased within a corresponding groove formed in the rotor casing. This is clearly shown in Figure 1. Grooves or recesses are formed about the circumference of the rotor casing 11. The wire bundles 12 are received within the grooves so that they can be molded into the casing 11 as described in paragraph [11]. Thus, the limitations of claims 10 and 15 are fully supported by the original specification and the drawings, and no amendment is necessary. However, to facilitate matters, Applicant has amended paragraph [11] to describe the features already shown in Figure 1. No new matter has been added.

Claims 11 and 13 include the feature of each of the wire bundles have a greater length than the rotor casing. Again, this is clearly shown in Figure 1. The end portions 13 of each wire bundle 12 are clearly shown as extending beyond the end face of the rotor casing 11. Thus, the limitations of claims 11 and 13 are fully supported by the original specification and the drawings, and no amendment is necessary. However, to facilitate matters, Applicant has amended paragraph [11] to describe the features already shown in Figure 1. No new matter has been added.

Claim 12 includes the feature of the wire bundles being molded into the rotor casing to form a single molded unit. As described at paragraphs [7] and [11], the wires are molded or otherwise encased into the rotor casing 11. This forms a single unit as shown in Figure 1. Thus, the limitation of claim 12 is fully supported by the original specification and the drawings, and no amendment is necessary. However, to facilitate matters, Applicant has amended paragraph [11] to describe the features already shown in Figure 1. No new matter has been added.

Claims 1-4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Graham et al. in view of Umeki. The examiner argues that Graham teaches an armature having "a cylindrical rotor casing 44, a plurality of spaced conducting bundles 18 and a circuit cap 50 electrically connecting the bundles 18 to each other." Applicant disagrees.

In response to arguments set forth in the applicant's previous response, the examiner argues that the wires in Graham, while being electrically connected to each other have portions that are physically spaced apart from each other. Graham does not teach the use of a plurality of wire bundles that are circumferentially spaced apart from each other. If component 18 is a continuous structure (Graham describes the component as forming a *continuous* helical structure), then Graham cannot be interpreted as teaching the use of "a plurality of wire bundles" as claimed by applicant.

Further, the examiner argues that Umeki teaches encasing wire bundles into a rotor casing, however, there is no such rotor casing to embed component 18 in Graham. Further, there would be no reason to embed component 18 in Graham into a rotor casing as claimed by applicant. There is no teaching in either of the references cited by the examiner, which would

motivate one of ordinary skill in the art to modify Graham using Umeki with the end result being Applicant's invention.

Graham is directed to providing a unique coil structure for an ironless core armature that eliminates many of the problems associated with traditional wire wound conductors, col. 5, lines 51-52. "In comparison with a wire wound armature, the wire has a minimum bend radius at the cylinder ends that increase the armature wall thickness. Prior art armatures are therefore thicker at the ends whereas the armature in this invention is no thicker at the ends than anywhere else along the armature wall." Graham, col. 7, lines 43-49. Umeki specifically addresses problems relating to attaching a coil structure to an iron core armature. Thus, Umeki teaches away from the technology addressed in Graham. It is impermissible to modify a reference in a manner that destroys or defeats the benefits that were achieved by the invention set forth in the reference. To modify Graham to replace the unique ironless core and continuous coil plate band structure with a wire structure and iron core armature, as taught by Umeki, would clearly destroy the benefits achieved by Graham. Thus, the rejection is not proper and must be withdrawn. Further, none of the features of claims 2-4 are disclosed or taught by Graham or Umeki, as explained in applicant's previous response.

Claims 5 and 6 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Graham and Umeki and further in view of Hsu. For the reasons set forth above, there is no motivation or suggestion to modify Graham with Umeki. Even assuming that there is sufficient motivation to make the modification, the references taken together do not disclose, suggest, or teach the features set forth in the claims. The Hsu reference does not make up for the deficiencies of Graham and Umeki.

Further, there is no suggestion or motivation to modify Graham with Hsu. The examiner argues that it would be obvious to use the connecting pin mate and end rings of Hsu in Graham to improve contact between the end rings and bar ends disclosed by Hsu. There would be no reason to utilize an end ring with connecting pins in Graham. The bands in Graham are already connected to each other. As described in Graham, the bands 18 are electrically connected to bands 22 on a second inner cylinder 42 to form a *continuous* helical structure (see Figure 5). To further incorporate an end ring with connecting pins would provide no benefit and would unnecessarily increase cost. Thus, for the reasons discussed above, in addition to the reasons set forth for claims 1-4, claims 5 and 6 are also allowable.

Claims 8 and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Graham in view of Umeki and further in view of Adachi. For the reasons set forth above, there is no motivation or suggestion to modify Graham with Umeki. Even assuming that there is sufficient motivation to make the modification, the references taken together do not disclose, suggest, or teach the features set forth in the claims. The Adachi reference does not make up for the deficiencies of Graham and Umeki.

Further, there is no suggestion or motivation to modify Graham with Adachi. Graham is directed to a unique ironless core armature for a DC motor having brushes. Adachi is directed to a method of connecting coil lead wires in a specific configuration to achieve an improved traditional coil wound structure for an AC motor. There would be no reason to incorporate this configuration into Graham, especially as Graham is directed to achieving a *continuous* helical structure that eliminates the need for a traditional wound coil. Thus, the modifications proposed

by the examiner would defeat the benefits achieved by Graham. Such a modification is improper.

Claims 10-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Graham in view of Umeki, in view of Adachi, and further in view of Kliman. For the reasons set forth above, there is no motivation or suggestion to modify Graham with Umeki or Adachi. Even assuming that there is sufficient motivation to make the modification, the references taken together do not disclose, suggest, or teach the features set forth in the claims. The Kliman reference does not make up for the deficiencies of Graham and Umeki.

Further, there is no motivation to modify Graham with Kliman. The examiner argues that Kliman teaches the use of a rotor 10 with wires 24 encased in grooves of the rotor 10, citing Figure 7, and argues that it would be obvious to incorporate this structure into Graham. Kliman teaches the use of a mandrel 10 that is encircled by slot liners 12. The mandrel 10 and slot liners 12 are used to wind coils for a traditional rotor. Graham was seeking to eliminate the traditional wound coil configuration. To modify Graham to include the modification of Kliman, as proposed by the examiner, would defeat the benefits achieved by Graham. Thus, the rejection is improper.

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For the reasons set forth above, all claims should be allowed. An indication of such is requested. Applicant believes that no additional fees are required, however, the Commissioner is authorized to charge Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds for any additional fees or credit the account for any overpayment.

Respectfully submitted,

Kerrie A. Laba, Reg. No. 42,777
Carlson, Gaskey & Olds
400 W. Maple Road, Ste. 350
Birmingham, MI 48009
(248) 988-8360

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CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States patent and Trademark Office, fax number (703) 872-9306, on February 23, 2004.

Laura Combs